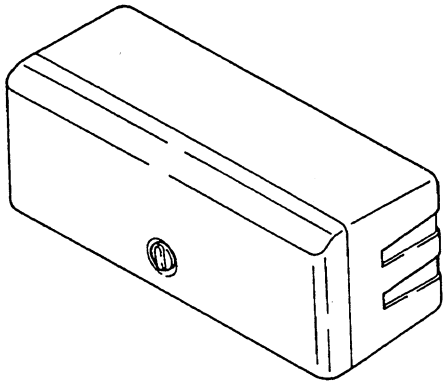
SA-W200

SERVICE MANUAL

US Model
Canadian Model



SPECIFICATIONS

Input:	500 mVrms (100% modulation)
Output:	500 mVrms (100% modulation)
Impedance:	20 kilohms
Speaker output:	9 W (100 Hz)
Power consumption:	11 W
Dimensions:	435 × 165 × 164 mm (W × H × D) (17 1/4 × 6 1/2 × 6 1/2 in.)
Mass:	3.9 kg (8 lbs. 10 oz.)

MICROFILM

ACTIVE SUPER WOOFER

SONY®

SA-W200

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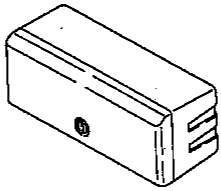
US Model
Canadian Model



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Speaker output:	9 W (100 Hz)
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ACTIVE SUPER WOOFER

SONY

MICROFILM

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SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNI MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUE EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNI IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DI FONCTIONNEMENT. NE LES REMPLACER QUE PAR DE COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUI DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENT PUBLIÉS PAR SONY.

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SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.

8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a coldwater pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

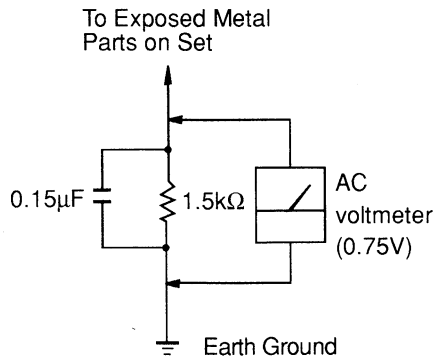

Fig. A. Using an AC voltmeter to check AC leakage.

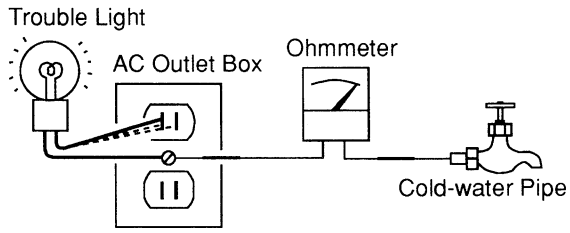

Fig. B. Checking for earth ground.

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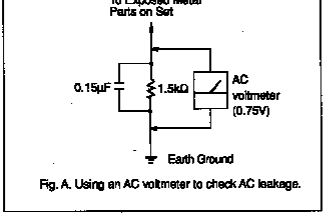

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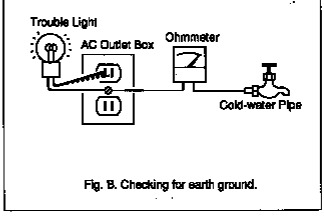


Fig. B. Checking for earth ground.

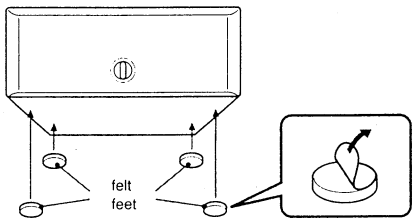
Connecting Active Super Woofer

Preparing for use

To enjoy the active super woofer's sound, make sure the connections are made as illustrated.

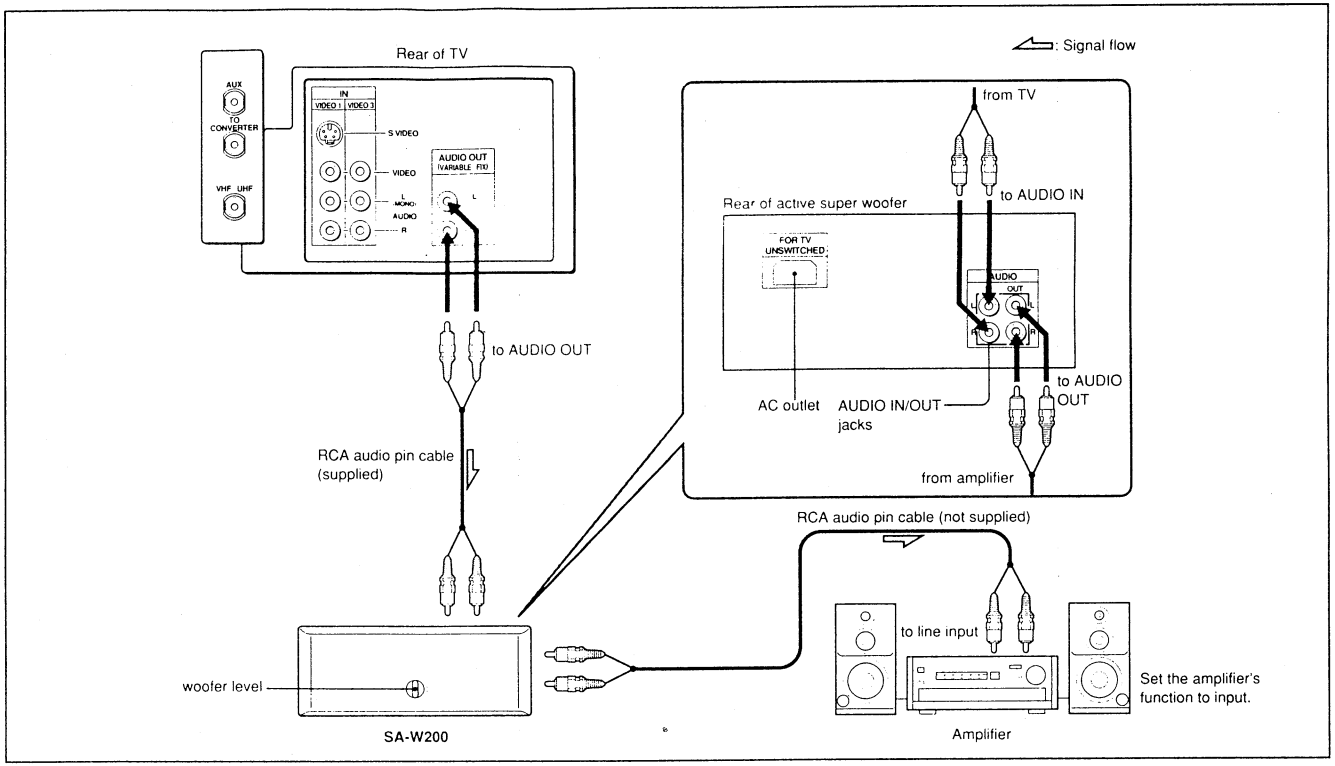
The active super woofer outputs the signal input to its AUDIO IN jacks. If you connect an audio system to the active super woofer's AUDIO OUT jacks, you can enjoy the sound from the audio system and the active super woofer simultaneously.

To make the active super woofer stable, attach the felt feet (supplied) to the bottom.



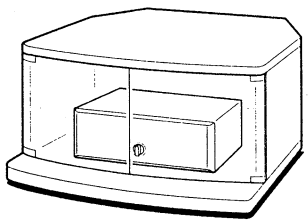
Notes

- Do not place the active super woofer on a TV set. To enjoy good sound, place the active super woofer on a hard object avoiding soft objects like carpets, sofas, etc.
- If you do not use the TV for more than 20 seconds, the active super woofer is turned off automatically to save on power consumption.
- You should only connect a TV set to the AC outlet on the active super woofer.



Using TV stand

When you place the active super woofer on a TV stand (not supplied), remove the rear panel of the stand.



Note

For good sound quality, avoid placing the stand in front of a curtain or close to a wall.

This section is extracted from instruction manual.

SECTION 1
GENERAL

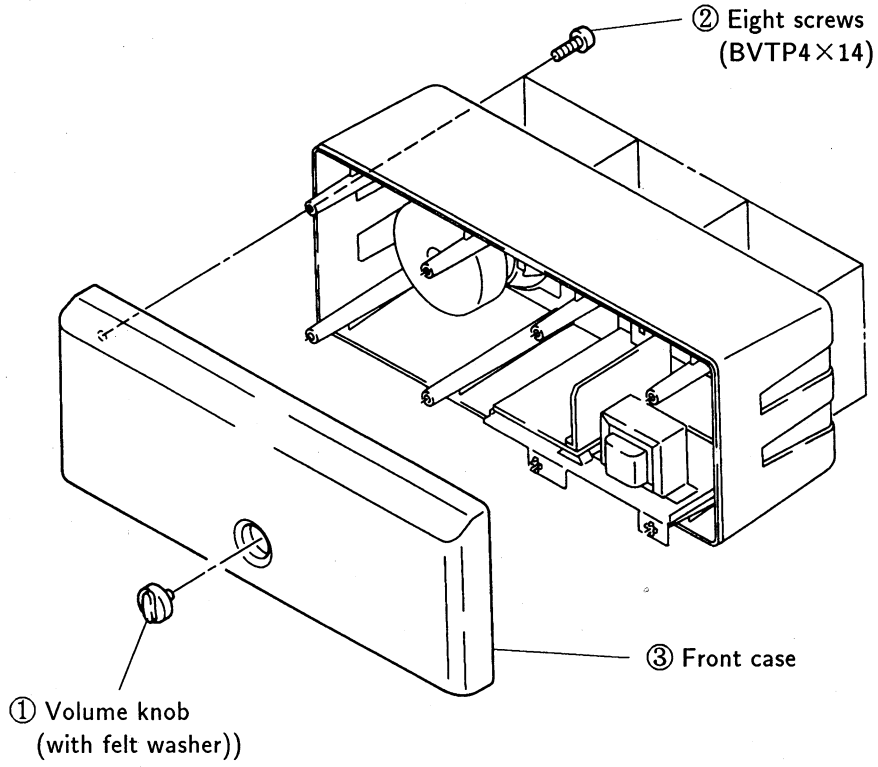
This section is extracted from instruction manual.

2-1. RI

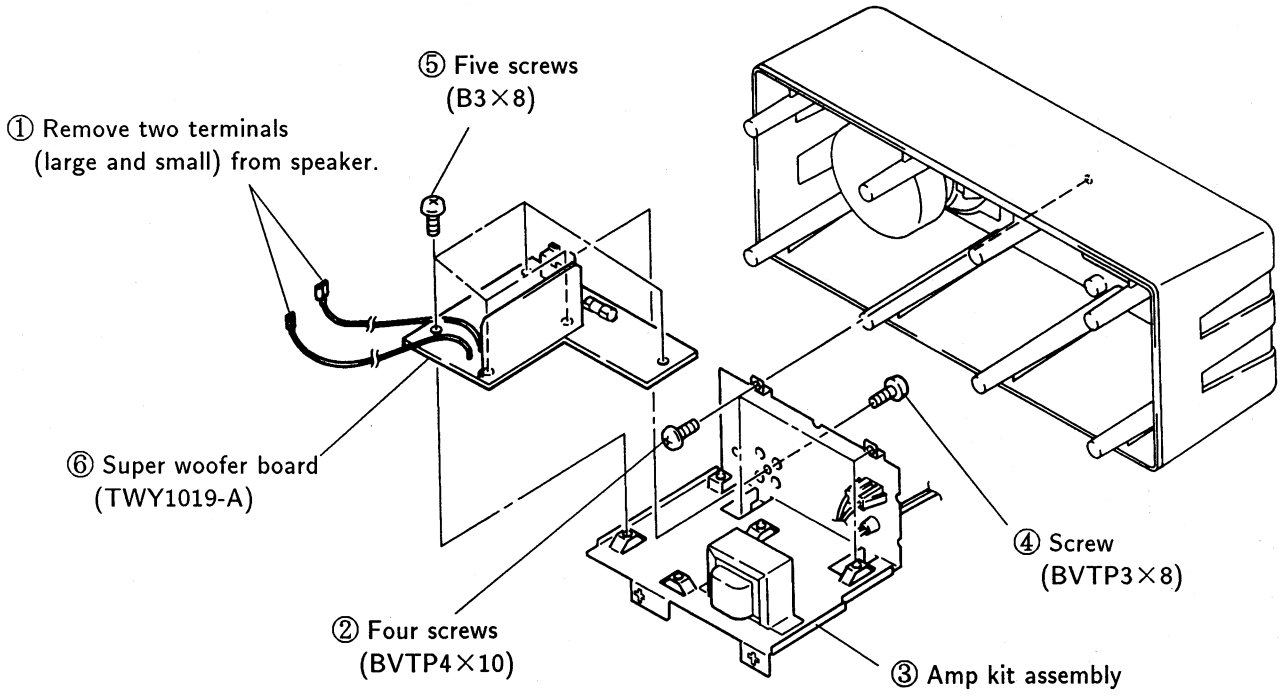
2-2. R

SECTION 2
DISASSEMBLY

2-1. REMOVAL OF FRONT CASE

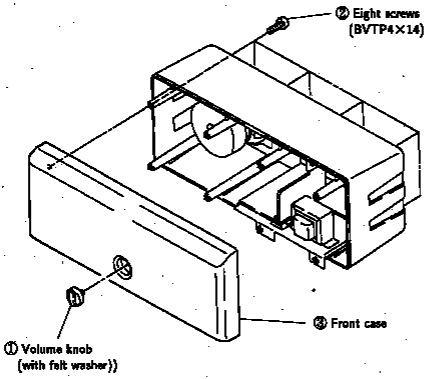


2-2. REMOVAL OF SUPER WOOFER BOARD (TWY1019-A)



SECTION 2
DISASSEMBLY

2-1. REMOVAL OF FRONT CASE



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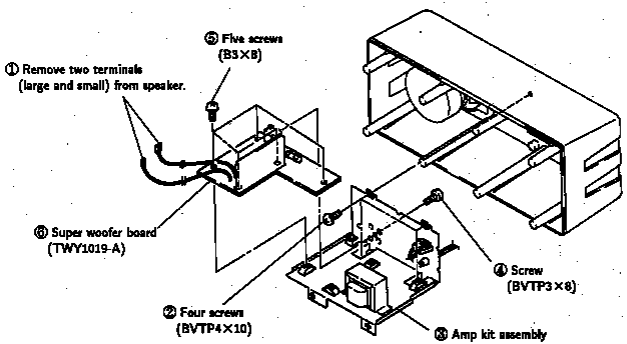


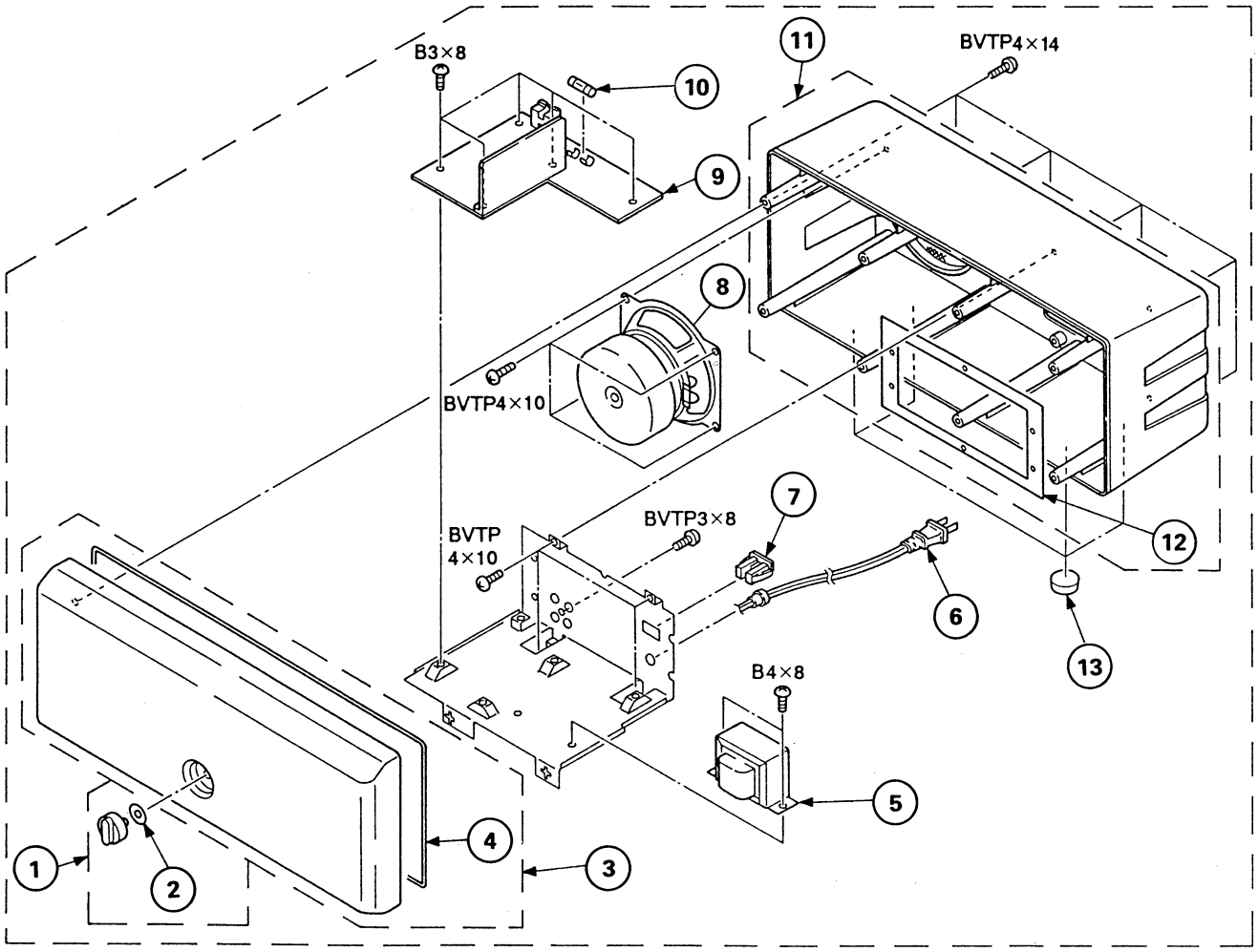
SECTION 4
EXPLODED VIEW

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

4-1. SPEAKER



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	9-904-749-01	VOLUME NOB	2
2	9-904-748-01	FELT WASHER	
3	9-904-745-01	FRONT CASE	4
4	9-904-747-01	ENCLOSURE SEALANT TUBE	
5 ⚠	9-904-751-01	TRANSFORMER, POWER	
6 ⚠	9-904-750-01	CORD, POWER	
7 ⚠	9-904-753-01	AC OUTLET	
8	9-900-278-01	SPEAKER	
9	9-904-754-01	AMP KIT(TWY1019-A)	
10 ⚠	9-904-752-01	FUSE (2A/125V)	
11	9-904-744-01	CABINET	12
12	9-904-746-01	ENCLOSURE SEALANT PACKING	
13	4-040-527-01	FOOT	

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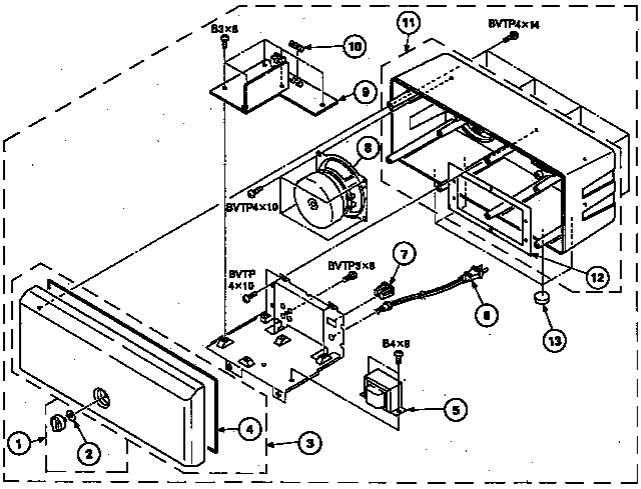

REF.NO.	PART NO.	DESCRIPTION	REMARK
1	9-904-749-01	VOLUME KNOB	2
2	9-904-748-01	BOLT WASHER	
3	9-904-745-01	FRONT CASE	4
4	9-904-747-01	ENCLOSURE SEALANT TUBE	
[illegible]			

REF.NO.	PART NO.	DESCRIPTION	REMARK
8	9-900-278-01	SPEAKER	
9	9-904-754-01	AMP KIT(TWY1019-A)	
[illegible]			
11	9-904-744-01	CABINET	12
12	9-904-746-01	ENCLOSURE SEALANT PACKING	
13	4-040-527-01	FOOT	

SUPER WOOFER BOARD

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

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Replace only with part number specified.

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Ne les remplacer que par une piece portant le numero specifie.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

REF.NO.	PART NO.	DESCRIPTION				REMARK
	9-904-754-01	SUPER WOOFER BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C001	1-102-114-00	CERAMIC	470PF	10%	50V	
C002	1-102-114-00	CERAMIC	470PF	10%	50V	
C003	1-124-903-11	ELECT	1MF	20%	50V	
C004	1-124-903-11	ELECT	1MF	20%	50V	
C005	1-130-494-11	FILM	0.082MF	5%	50V	
C006	1-130-490-11	FILM	0.039MF	5%	50V	
C007	1-130-494-11	FILM	0.082MF	5%	50V	
C008	1-130-490-11	FILM	0.039MF	5%	50V	
C009	1-124-903-11	ELECT	1MF	20%	50V	
C010	1-124-903-11	ELECT	1MF	20%	50V	
C011	1-102-973-00	CERAMIC	100PF	10%	50V	
C012	1-124-903-11	ELECT	1MF	20%	50V	
C013	1-124-908-00	ELECT	0.47MF	20%	50V	
C014	1-124-907-11	ELECT	10MF	20%	50V	
C015	1-124-910-11	ELECT	47MF	20%	50V	
C016	1-124-472-11	ELECT	470MF	20%	10V	
C017	1-124-472-11	ELECT	470MF	20%	10V	
C018	1-124-120-11	ELECT	220MF	20%	25V	
C019	1-124-120-11	ELECT	220MF	20%	25V	
C020	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C021	1-130-491-00	FILM	0.047MF	5%	50V	
C022	1-130-491-00	FILM	0.047MF	5%	50V	
C023	1-124-360-00	ELECT	1000MF	20%	16V	
C024	1-124-360-00	ELECT	1000MF	20%	16V	
C025	1-124-636-91	ELECT	3300MF	20%	25V	
C026	1-124-472-11	ELECT	470MF	20%	10V	
C027	1-124-472-11	ELECT	470MF	20%	10V	
C028	1-124-472-11	ELECT	470MF	20%	10V	
C029	1-124-907-11	ELECT	10MF	20%	50V	
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D002 ⚠	9-904-765-01	DIODE ERA15-02VH-T				
D003	9-904-766-01	DIODE RD9R1ES(B2)-T				
D004	9-904-766-01	DIODE RD9R1ES(B2)-T				
D005	8-719-802-30	DIODE 1SS176				
D006	8-719-802-30	DIODE 1SS176				

REF.NO.	PART NO.	DESCRIPTION				REMARK
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IC002	9-904-756-01	IC NJM2068S				
IC003	9-904-756-01	IC NJM2068S				
IC004	9-904-757-01	IC M5233L				
IC005	9-904-755-01	IC TA8225L(PAIO-K)				
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Q002	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q004	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		<RESISTOR>				
R001	1-249-405-11	CARBON	100	5%	1/4W	
R002	1-249-405-11	CARBON	100	5%	1/4W	
R003	1-249-426-11	CARBON	56K	5%	1/4W	
R004	1-249-426-11	CARBON	56K	5%	1/4W	
R005	1-247-862-11	CARBON	20K	5%	1/4W	
R006	1-247-862-11	CARBON	20K	5%	1/4W	
R007	1-247-862-11	CARBON	20K	5%	1/4W	
R008	1-247-862-11	CARBON	20K	5%	1/4W	
R009	1-247-862-11	CARBON	20K	5%	1/4W	
R010	1-247-862-11	CARBON	20K	5%	1/4W	
R011	1-249-431-11	CARBON	15K	5%	1/4W	
R012	1-249-413-11	CARBON	470	5%	1/4W	
R013	1-247-864-11	CARBON	24K	5%	1/4W	
R014	1-247-864-11	CARBON	24K	5%	1/4W	
R015	1-247-864-11	CARBON	24K	5%	1/4W	
R016	1-247-864-11	CARBON	24K	5%	1/4W	
R017	1-249-417-11	CARBON	1K	5%	1/4W	
R018	1-249-429-11	CARBON	10K	5%	1/4W	
R019	1-247-903-91	CARBON	1M	5%	1/4W	
R020	1-249-426-11	CARBON	5.6K	5%	1/4W	
R021	1-249-417-11	CARBON	1K	5%	1/4W	
R022	1-249-429-11	CARBON	10K	5%	1/4W	
R023	1-249-429-11	CARBON	10K	5%	1/4W	
R024	1-249-417-11	CARBON	1K	5%	1/4W	
R025	1-247-839-11	CARBON	2.2K	5%	1/4W	
R026	1-249-429-11	CARBON	10K	5%	1/4W	
R027	1-249-417-11	CARBON	1K	5%	1/4W	
R028	1-247-903-91	CARBON	1M	5%	1/4W	
R029	1-249-433-11	CARBON	22K	5%	1/4W	
R030	1-249-440-11	CARBON	82K	5%	1/4W	
R031	1-249-433-11	CARBON	22K	5%	1/4W	
R032	1-247-839-11	CARBON	2.2K	5%	1/4W	
R033	1-249-433-11	CARBON	22K	5%	1/4W	

SUPER WOOFER BOARD

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

REF.NO.	PART NO.	DESCRIPTION				REMARK
	9-904-754-01	SUPER WOOFER BOARD, COMPLETE				
		<CAPACITOR>				
C001	1-102-114-00	CERAMIC	470PF	10%	50V	
C002	1-102-114-00	CERAMIC	470PF	10%	50V	
C003	1-124-905-11	ELECT	1MF	20%	50V	
C004	1-124-905-11	ELECT	1MF	20%	50V	
C005	1-130-494-11	FILM	0.082MF	5%	50V	
C006	1-130-490-11	FILM	0.039MF	5%	50V	
C007	1-130-494-11	FILM	0.082MF	5%	50V	
C008	1-130-490-11	FILM	0.039MF	5%	50V	
C009	1-124-903-11	ELECT	1MF	20%	50V	
C010	1-124-903-11	ELECT	1MF	20%	50V	
C011	1-102-973-00	CERAMIC	100PF	10%	50V	
C012	1-124-903-11	ELECT	1MF	20%	50V	
C013	1-124-908-00	ELECT	0.47MF	20%	50V	
C014	1-124-907-11	ELECT	10MF	20%	50V	
C015	1-124-910-11	ELECT	47MF	20%	50V	
C016	1-124-472-11	ELECT	470MF	20%	10V	
C017	1-124-472-11	ELECT	470MF	20%	10V	
C018	1-124-120-11	ELECT	220MF	20%	25V	
C019	1-124-120-11	ELECT	220MF	20%	25V	
C020	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C021	1-130-491-00	FILM	0.047MF	5%	50V	
C022	1-130-491-00	FILM	0.047MF	5%	50V	
C023	1-124-560-00	ELECT	1000MF	20%	16V	
C024	1-124-560-00	ELECT	1000MF	20%	16V	
C025	1-124-536-91	ELECT	3300MF	20%	25V	
C026	1-124-472-11	ELECT	470MF	20%	10V	
C027	1-124-472-11	ELECT	470MF	20%	10V	
C028	1-124-472-11	ELECT	470MF	20%	10V	
C029	1-124-907-11	ELECT	10MF	20%	50V	
		<CONNECTOR>				
CN001	9-904-761-01	PIN, TERMINAL				
		<DIODE>				
D003	9-904-766-01	DIODE RD9B1ES(B2)-T				
D004	9-904-766-01	DIODE RD9B1ES(B2)-T				
D005	8-719-802-90	DIODE 1SS176				
D006	8-719-802-90	DIODE 1SS176				

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<IC>				
IC001	9-904-756-01	IC MAM206SS				
IC002	9-904-756-01	IC MAM206SS				
IC003	9-904-756-01	IC MAM206SS				
IC004	9-904-757-01	IC MS2331				
IC005	9-904-755-01	IC TA8225L(PAIO-E)				
		<JACK>				
J001	9-904-755-01	RCA JACK				
		<TRANSISTOR>				
Q001	8-729-140-96	TRANSISTOR 2SD774-34				
Q002	8-729-119-78	TRANSISTOR 2SC2785-RPE				
Q003	8-729-119-76	TRANSISTOR 2SA1175-RPE				
Q004	8-729-119-76	TRANSISTOR 2SA1175-RPE				
		<RESISTOR>				
R001	1-249-405-11	CARBON	100	5%	1/4W	
R002	1-249-405-11	CARBON	100	5%	1/4W	
R003	1-249-426-11	CARBON	56K	5%	1/4W	
R004	1-249-426-11	CARBON	56K	5%	1/4W	
R005	1-247-862-11	CARBON	20K	5%	1/4W	
R006	1-247-862-11	CARBON	20K	5%	1/4W	
R007	1-247-862-11	CARBON	20K	5%	1/4W	
R008	1-247-862-11	CARBON	20K	5%	1/4W	
R009	1-247-862-11	CARBON	20K	5%	1/4W	
R010	1-247-862-11	CARBON	20K	5%	1/4W	
R011	1-249-431-11	CARBON	15K	5%	1/4W	
R012	1-249-413-11	CARBON	470	5%	1/4W	
R013	1-247-864-11	CARBON	24K	5%	1/4W	
R014	1-247-864-11	CARBON	24K	5%	1/4W	
R015	1-247-864-11	CARBON	24K	5%	1/4W	
R016	1-247-864-11	CARBON	24K	5%	1/4W	
R017	1-249-417-11	CARBON	1K	5%	1/4W	
R018	1-249-429-11	CARBON	10K	5%	1/4W	
R019	1-247-903-91	CARBON	1K	5%	1/4W	
R020	1-249-426-11	CARBON	5.6K	5%	1/4W	
R021	1-249-417-11	CARBON	1K	5%	1/4W	
R022	1-249-429-11	CARBON	10K	5%	1/4W	
R023	1-249-429-11	CARBON	10K	5%	1/4W	
R024	1-249-417-11	CARBON	1K	5%	1/4W	
R025	1-247-839-11	CARBON	2.2K	5%	1/4W	
R026	1-249-429-11	CARBON	10K	5%	1/4W	
R027	1-249-417-11	CARBON	1K	5%	1/4W	
R028	1-247-903-91	CARBON	1K	5%	1/4W	
R029	1-249-435-11	CARBON	22K	5%	1/4W	
R030	1-249-440-11	CARBON	82K	5%	1/4W	
R031	1-249-435-11	CARBON	22K	5%	1/4W	
R032	1-247-839-11	CARBON	2.2K	5%	1/4W	
R033	1-249-435-11	CARBON	22K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

SUPER WOOFER BOARD

REF.NO.	PART NO.	DESCRIPTION				REMARK
R034	1-249-429-11	CARBON	10K	5%	1/4W	
R035	1-249-429-11	CARBON	10K	5%	1/4W	
R036	1-249-433-11	CARBON	22K	5%	1/4W	
R037	1-249-417-11	CARBON	1K	5%	1/4W	
R038	1-247-866-11	CARBON	30K	5%	1/4W	
R039	1-249-405-11	CARBON	100	5%	1/4W	
R040	1-247-842-11	CARBON	3K	5%	1/4W	
R041	1-249-405-11	CARBON	100	5%	1/4W	
R042	1-247-842-11	CARBON	3K	5%	1/4W	
R043	9-904-764-01	METAL OXIDE	1	5%	1/2W	
R044	9-904-764-01	METAL OXIDE	1	5%	1/2W	
R046 ⚠	9-904-762-01	METAL OXIDE	10	5%	1/4W	
R047	9-904-763-01	METAL OXIDE	1.8K	5%	1/2W	
R048	1-249-429-11	CARBON	10K	5%	1/4W	
R049	1-249-429-11	CARBON	10K	5%	1/4W	
		<VARIABLE RESISTOR>				
VR001	9-904-760-01	VOLUME	20K			
		**********				
		MISCELLANEOUS				
		**********				
⚠	9-904-750-01	CORD, POWER				
⚠	9-904-753-01	AC OUTLET				
F001 ⚠	9-904-752-01	FUSE (2A/125V)				
SP901	9-900-278-01	SPEAKER				
T901 ⚠	9-904-751-01	TRANSFORMER, POWER				
		**********				
		ACCESSORIES AND PACKING MATERIALS				
		**********				
	1-558-787-81	CORD, CONNECTION				
	3-757-442-11	MANUAL, INSTRUCTION, WOOFER (ENGLISH, FRENCH, SPANISH)				
	4-040-527-01	FOOT				

SUPER WOOFER BOARD

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R034	1-249-429-11	CARBON	10K	5% 1/4W	
R035	1-249-429-11	CARBON	10K	5% 1/4W	
R036	1-249-433-11	CARBON	22K	5% 1/4W	
R037	1-249-417-11	CARBON	1K	5% 1/4W	
R038	1-247-866-11	CARBON	39K	5% 1/4W	
R039	1-249-405-11	CARBON	100	5% 1/4W	
R040	1-247-842-11	CARBON	3K	5% 1/4W	
R041	1-249-405-11	CARBON	100	5% 1/4W	
R042	1-247-842-11	CARBON	3K	5% 1/4W	
R043	9-904-764-01	METAL OXIDE	1	5% 1/2W	
R044	9-904-764-01	METAL OXIDE	1	5% 1/2W	
R047	9-904-763-01	METAL OXIDE	1.8K	5% 1/2W	
R048	1-249-425-11	CARBON	10K	5% 1/4W	
R049	1-249-425-11	CARBON	10K	5% 1/4W	

<VARIABLE RESISTOR>

VR001	9-904-760-01	VOLUME	20K

MISCELLANEOUS

SP901	9-900-278-01	SPEAKER	

ACCESSORIES AND PACKING MATERIALS

1-558-787-81 CORD, CONNECTION
3-757-442-11 MANUAL, INSTRUCTION, WOOFER (ENGLISH, FRENCH, SPANISH)
4-040-527-01 FOOT

9-964-959-01

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English
93HR0947-1
Printed in Japan
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